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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **SHIMIZU, Takehiro, et al.**

Group Art Unit:1752

Serial No.: **10/589,830**

Examiner:(Not Yet Assigned)

Filed: **August 17, 2006**

For: **PROCESS FOR PRODUCING ALICYCLIC OXETANE COMPOUND**

**LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

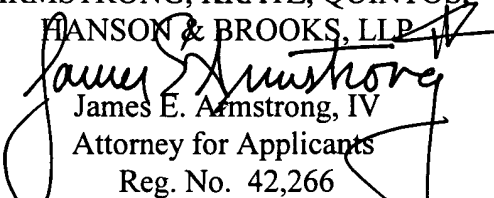
Date: January 4, 2007

Sir:

The attention of the Patent and Trademark Office is hereby directed to a copy of the PCT Notification of Transmittal of Copies of Translation of the International Preliminary Report on Patentability attached herewith.

This Report is submitted herewith to be placed in the U.S. Patent and Trademark Office file of this case.

Respectfully submitted,

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**23850**

PATENT TRADEMARK OFFICE

Enclosure: PCT Notification of Transmittal of Copies of Translation of the International Preliminary Report on Patentability

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

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JAPON



Date of mailing (day/month/year)  
07 December 2006 (07.12.2006)

Applicant's or agent's file reference  
NTK05-1657WO

International application No.  
PCT/JP2005/002211

**IMPORTANT NOTIFICATION**

International filing date (day/month/year)  
15 February 2005 (15.02.2005)

Applicant

NIPPON STEEL CHEMICAL CO., LTD. et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

EP, KR

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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TRANSLATION

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>NTK05-1657WO</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/JP2005/002211</b>	International filing date (day/month/year) <b>15.02.2005</b>	Priority date (day/month/year) <b>23.02.2004</b>
International Patent Classification (IPC) or national classification and IPC <b>C07D305/06 (2006.01)</b>		
Applicant <b>NIPPON STEEL CHEMICAL CO., LTD.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

- a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
- ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))

\_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002211

Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
    - ☐ international search (Rule 12.3 and 23.1(b))
    - ☐ publication of the international application (Rule 12.4)
    - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
  - ☐ the international application as originally filed/furnished
  - ☒ the description:
    - pages 1-12 \_\_\_\_\_ as originally filed/furnished
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☒ the claims:
    - nos. 2, 3 \_\_\_\_\_ as originally filed/furnished
    - nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
    - nos.\* 1 \_\_\_\_\_ received by this Authority on 17.01.2006
    - nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☐ the drawings:
    - sheets \_\_\_\_\_ as originally filed/furnished
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002211

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims 1-3

YES

Claims

NO

Inventive step (IS)

Claims 1-3

YES

Claims

NO

Industrial applicability (IA)

Claims 1-3

YES

Claims

NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP 11-106380 A (Ube Industries, Ltd.), 20  
April 1999

Document 2: JP 11-335314 A (Mitsui Chemicals Co., Ltd.),  
7 December 1999

Document 3: JP 10-204002 A (Dainippon Ink & Chemicals,  
Incorporated), 4 August 1998

Document 4: JP 06-329569 A (New Japan Chemical Co.,  
Ltd.), 29 November 1994

Claims 1 to 3

Document 1 sets forth an aromatic oxetane compound having an aromatic residual group represented by general formula (5) in the description of this application.

Documents 2 to 4 indicate that a substituted aromatic compound is subjected to nuclear hydrogenation in the presence of a hydrogenation catalyst in order to obtain a substituted alicyclic compound (see in particular document 2, claim 2 and embodiments; document 3, claim 1 and embodiments; and document 4, claim 1 and embodiments).

However, the feature wherein an aromatic oxetane compound having an aromatic residual represented by general formula (4) or (5) is subjected to nuclear

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002211

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

hydrogenation, thereby producing a corresponding alicyclic oxetane compound, is neither disclosed nor suggested in documents 1 to 4 which are related to said invention.

That being the case, the invention set forth in claims 1 to 3 is novel and involves an inventive step in relation to documents 1 to 4.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/002211

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

In a letter received by this International Preliminary Examining Authority on 17 January 2006, the applicant has amended the claims in page by page, but is normally preferable that amendments to claims be carried out claim by claim.